Regional and remote airports under stress in Australia

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Abstract
Australia's airline industry was born on connecting regional communities to major cities, but almost a century later, many regional and remote communities are facing the prospect of losing their air transport services. The focus of this paper is to highlight key issues and concerns surrounding remote, rural and regional airports in Australia using a network governance framework. Contributions are focused towards regional and remote airport managers, decision makers, and policy makers to stimulate further discussion towards retaining regional and remote services to communities.

1. Introduction

Air services are essential to the social, economic and cultural sustainability of Australia's remote and regional communities. Over 4 million Australians rely on regional air services across the country (RAAA, 2011). Regional airlines deliver essential services that include transport and freight, essential medical and flying doctor services, search and rescue, social and law enforcement services to the bush (Australian hinterland), specialised resource delivery (for example, rock lobsters from Port Lincoln, South Australia) and business and tourism travel. Regular passenger transport (RPT) is a critical service to rural Australia that connects regional, rural and remote centres to each other and to the capital cities. Effective air services are closely linked to quality of life and resilient social networks in rural communities, and enable rural and remote residents to access the everyday events that urban residents take for granted. Regional industries such as tourism, mining and manufacturing, which have a significant impact on employment prospects and resilience of rural, regional and remote (RRR) communities, are also dependent on reliable air services. The outback's defence against the tyranny of distance, therefore, is an effective and resilient air service network embedded within a larger airline and airport system. However, for RRR communities the demand for air services does not appear to lead to supply.

For more than 100 RRR communities, air service delivery is dependent on a resilient network of airports and airlines. This is challenging in a contemporary environment for remote and regional air service delivery that is complex, fluid, and subject to contextual and environmental challenges. In the period between 2005 and 2008, passenger numbers rose on regional routes from 17.5 to 22.3 million, while at the same time the number of airports decreased from 170 to 138 (BITRE, 2009). Contributing to this loss of airports has been the demise of numerous domestic airlines as a result of deregulation (market competition policies leading to liquidation, bankruptcy, receivership, merger or takeover). Airports often compete with each other in a larger airline network, and as regional airlines turn to a business model of larger aircraft with fewer flights and destinations, airports struggle to offer services to the regional community. Thus, at the airline network scale, inefficiencies at the airport management level and competition often result in communities either losing their services or spending large amounts of capital on underutilised airport infrastructure.

Recent research on Australia's airports have focused on larger privatised airports (see [Assaf, 2010], [Baker and Freestone, 2011], [Forsyth, 2003] and [Freestone et al., 2006]), whose dominant challenges appear to be meeting demand, diversifying revenues and maximising profits. However, little consideration has been given to Australia's smaller, yet still important airports (exceptions include [Donehue et al., 2012] and [Collins et al., 2010]). The lack of research into regional and remote airports is understandable, given the relative newness of airport management research; making the more economically significant airports a more pressing concern for researchers. To serve as a gentle reminder to the airport management research community and to policy makers, this paper provides an initial foray towards understanding the pressures and stresses currently faced by regional and remote airports in Australia.

The focus of this paper is to provide a broader explanation of the services that airports and airlines provide in the rural and remote regions of Australia. Our approach is to offer an exploratory conceptual framework that categorises airports according to their services. We use a governance lens to review airport management functions to aid the classification. Very little research has been conducted in Australia on RRR airports, and limited analysis has been conducted on the changing economic and structural environments surrounding their management. In Australia, the Bureau of Infrastructure, Transport and Regional Economics conducts basic research on the changing conditions for RRR airports, however little explanation is added to illuminate why the changes are occurring and the challenges that RRR airports are facing. Our argument in this paper is that RRR airports need to be classified and funded differently than with the present policy framework. These airports serve a diverse range of functions in the private and public domain, and in a privatised environment — much of the public value has been degraded. This paper provides an overview of the importance of network governance for the management of RRR airports. By analysing the issues and concerns using a network governance approach, this research responds to Graham's (2011) call to focus on governance and institutional structures for airports. In the absence of strong national policy to protect RRR airports in remote areas, different management approaches have to be embraced. We argue that network governance provides a means to improve RRR air service resilience by looking beyond traditional airport and airline management structures. Eight semi-structured interviews with experts (CEOs and senior managers) in airport and airline transport were conducted to supplement the literature review to examine the challenges faced by airline and airports with respect to the delivery of services.

1.1. The governance of Australia's regional and remote airports

Governance is the way in which society is organised to define who makes decisions, who is included in the decision making process, and how decision making actors relate to one another (Kooiman, 2003). Governance legitimises and organises actors and institutions in decision making arenas, actioning authority under different sets of rules, moral orders and rationales (Keast, Mandell, & Brown, 2006). Hierarchies, markets and networks are three models of governance that are generally “accepted in literature”, each with its own advantages and disadvantages ([Powell, 1990] and [Rhodes, 2007]). However, in the “real world”, organisations are almost never a perfect representation of a single governance mode, drawing on the benefits of one to limit the negative attributes of another. The result is a mixed or hybrid form of governance that is typically dominated by, or favours, a particular ‘ideal’ governance mode.

Airports are arenas typically rife with the ‘mixed’ provision of ‘public’ infrastructure, and Australia's Airports Act 1996 is representative of a hybrid governance arrangement tailored to the task of providing public infrastructure. This hybrid arrangement favours a market-based approach to the governance of Australia's major airports, with the country's major airports privately run under long-term (99 year) lease agreements from the Federal Government. However, medium, small and rural airports have not been as readily privatised, and remain more centrally controlled by remaining under government ownership and control.

Australia's historical rationale for aviation, that is, as a means of linking remote rural communities to the busier metropolises of the coastlines, has not necessarily translated into a modern aviation reality of a well-connected country. While Australia's capital and other larger cities are connected via a network of airlines, the infrastructure for connecting rural Australia is still in need of development. A map of Australia's airport locations, with respect to providing communities with access to aviation transport, is depicted below in Fig. 1.

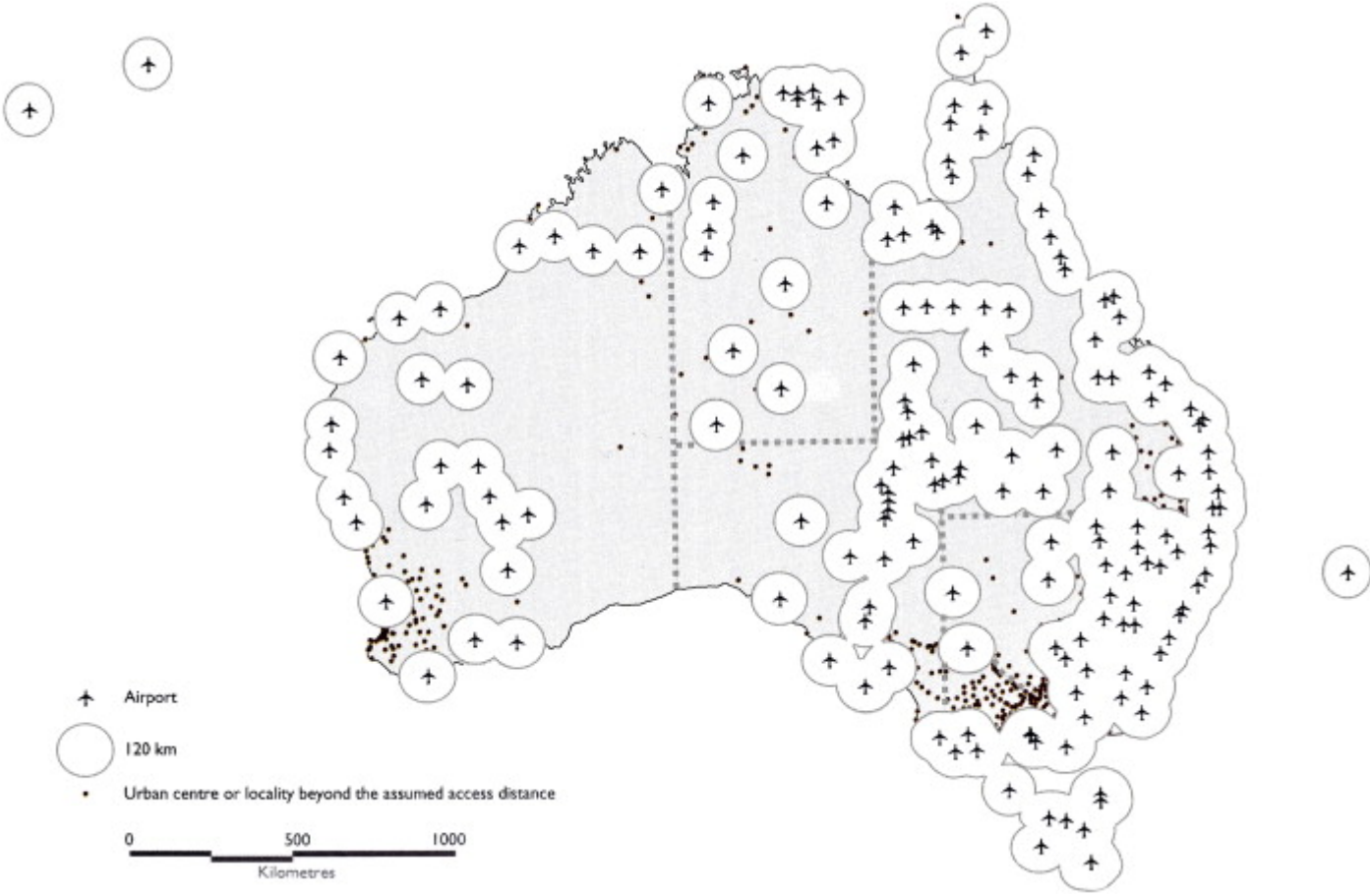

Fig. 1. Locations beyond the assumed access distance of 40 km and 120 km to air services in Australia, 2005.

The figure was sourced from BITRE (2008, 134) in a report on air transport services in regional Australia. The size of airports was classified by BITRE (2008, 12) as being large when an airport was accountable for 1.00% of Australia's total passenger movements (international and domestic) per year, medium when accountable for between 0.25% and 0.999%, small when accountable for between 0.05% and 0.249%, and rural when accountable for less than 0.05%. Of particular importance in the report, and highlighted in the figure above, are urban centres that fall outside of Australia's air transport network — communities without ready access to air transport. For these regional and rural communities, air transport is not just a convenience for business or leisure, but also is a link to more specialised services such as health and education, and to critical functions such as emergency services. The critical role that airports play in RRR communities suggests that airports should be fostered and protected, yet airports appear to be difficult infrastructures for RRR communities to maintain. Hence, policy makers and academe need to respond by

providing greater information and clarity on how and why RRR airports could be at risk of being lost to the communities they service.

2. Air service delivery to rural Australia: airlines and airports

The air service delivery in Australia, and most of the world, consists of the interaction of airlines and airports. In a deregulated environment this interaction often involves a market that combines two very different business models. However, the trends with both airports and airlines are very similar. For example, the reduction in the number of airlines flying in regional Australia delivering RPT services has mirrored the reduction in the number of airports. The number of operating airlines has halved over the last 25 years: in 1985, 53 different airlines serviced regional airports; this dropped to 38 airlines in 2000, 27 in 2008 (BITRE 2009) and 24 in 2011 (RAAA, 2011).

Within the regions, airlines and airports have a relationship that is mutually dependent, but the synergy is often difficult because of different business models. Airlines compete with each other for seat pricing and location — often in the same airport market. However, they have the option to move to other airports to accommodate their network needs. Airports are capital and infrastructure intensive businesses, where investments are made for single purpose use. In small regional airports this is proportionally a large expense — where there may be a long term required to get a return on investment.

In Australia head taxes (tax per passenger — for example Whyalla airport in South Australia charges $7.00 per person head tax) are used by RRR airports as a basis for aeronautical charges. A variety of subsidies are used to support regional aviation at the Commonwealth level such as the Remote Areas Services scheme, the Remote Aviation Infrastructure fund, and the Enroute Charges subsidy. However, the primary source of revenue for airports from RPT airlines is sourced from head taxes. Thus, both businesses require a degree of certainty in delivering mobility for rural Australia; when this certainty is affected, then the market may not always deliver sustainable outcomes for mobility.

The relationship between airlines and RRR airports is challenged at times when competition affects historical practices (and the traditional network relationships). For example from the airport perspective, often low cost carriers (LCC) will open non traditional routes (see Collins et al., 2010) due to lower aeronautical charges and put airports into a bidding war to retain their RPT services — with the lowest fare often winning (Newcastle Airport Limited, 2011). This approach is no different from LCC business strategies at a global scale where cost structures are lowered by avoiding congested spaces and expensive capital investment (de Neufville, 2006). Alternative routes and airports are sought to keep the costs minimal. Within the regions this has an impact on which airport can attract a LCC and what prices they are willing to accept to retain RPT service. For example, the introduction of Tiger Airways into the Australian regional market for the larger regional airports such as Bundaberg has had a considerable impact on service delivery to meet the requirements of the new aircraft and increased flights over the past 2 years.

At the other side of the relationship, airports often provide a degree of uncertainty to airlines when head taxes are raised with little notification or justification. Regional airports are often accused of operating as monopolies (Tyrell, 2011) because they

are the only destination end-point. As such, they can fix the cost of landing for the airlines without consultation. Whereas airlines compete with each other by seat pricing, in many cases airports do not have competition from other airports. As a result, in a non regulated environment RRR airports can increase airport charges as they choose.

The Regional Express (REX — one of the largest regional airlines in Australia) submission to the Australian Productivity Commission on Economic Regulation of Airport Services notes that increases in RRR airport charges are often indiscriminate and unjustified. The submission states "…in FY10/11 alone REX has encountered significant passenger head tax increases at Burnie Airport (20% increase), Mt. Gambier (46% increase which followed a 9% increase, and an 8% increase during FY08/09)" (REX 2011, p.16). The argument follows that passenger growth should determine head taxes rather than council-owned airports adjusting rates without justification. REX's position is similar to other airline positions that note that much of the revenue derived from council airports is not funnelled back to airport services — but rather, is diverted to general council revenues.

The division between regional airlines and airports is reflected in separate national associations. RRR airports are a part of the Australian Airports Association, a non-profit organisation that represents 185 airports and aerodromes Australia wide, which operates as a policy advocate and lobby for airports. Regional airlines are represented by the Regional Aviation Association of Australia (RAAA) which also acts a lobby group for the smaller airlines across Australia. Each of the associations acts in the interest of their clients, with little harmony with respect to the coordination of transport services.

Within this context of air service delivery, the governance of airports is a critical factor in the management approaches that have been taken over the last two decades since privatisation. The governance arrangements for airports across Australia are diverse, and the management approaches taken by airports equally diverse.

3. A conceptual framework for the governance of RRR airports

The governance of Australia's RRR airports has experienced a revolution of deregulation. In short, airports have transitioned from military assets and infrastructures for nation building to spaces of flows connecting regional Australia to large urban centres and the world. As this transition has unfolded, the governance of airports has shifted from centralised control and decision making to more localised or market forms of administration.

The following paragraphs provide background for the ongoing deregulation of Australia's regional and rural airports by describing the broader policy changes that have been made at a national level; providing context for the airport management concerns discussed in 3.1, 3.2 and 3.3. The framework that is offered includes large international airports to provide a contrast to the business of the medium, small and remote airports. Although the Capital City international airports are not the focus of this paper, much of the policy that is developed in Australia is focused on the large airports — and smaller airports are impacted by the same policies. The framework in Section 3.4 is divided into airport classification, dominant issues and concerns, and

implications for business models and governance arrangements. Within the table, dominant issues and concerns are derived from interviews, the literature, and policy/issue documents; and each of the following sections provides examples to support the table. The governance and business models highlight the different strategies and management approaches taken by airports to survive as they face a variety of different stressors and concerns.

The historical context of airport governance sets the present policy context. Following the Pacific War (1941–45), the Australian Government spent heavily on upgrading and maintaining its major airports, and by the 1980s it became apparent that the Department of Civil Aviation “could scarcely cope with the growth in traffic brought by the jet age” of the 1960s and 1970s (Lee, 2003). The government had found itself spending more and more on maintaining its nation's aviation infrastructure with relatively mixed success. The Federal Government owned 81 airports, and contributed to the maintenance of another 436 smaller aerodromes, and in only recovering 55% of costs directly from aviation it became apparent that the administering of Australia's airports needed to change (Bosch, Hudson, & Linehan, 1984). To reduce the fiscal burden on the Federal Government, airports were handed over to local governments and private consortia via the Airport Local Ownership Programme (BITRE, 2008), shifting the funding of maintenance and development to local owners (and in turn rate payers). The global recession in the early 1980s spurred the government into a period of sweeping economic reform (see Gruen & Sayegh, 2005), and significant structural changes were made to the governance arrangements of Australia's major airports; decentralising the management of airports with the creation of the Federal Airports Corporation (FAC) under the Federal Airports Corporation Act 1986. The FAC was mandated to review the use and capacity of federally owned airports with the intent of downsizing or removing superfluous or non-performing airport assets. By 1988 the FAC had taken control of many major airports to carry out changes it deemed necessary for the future of Australia's aviation industry.

Despite the broad array of changes made by the FAC, Australia's major airports were still a fiscal burden on the Federal Government. Inaccurately seeing Australia's air transport industry as reaching maturity, the Federal Government moved to privatise its major airports as a part of a broader strategy to stimulate the competitiveness of the Australian economy ([Harman and Harman, 1996] and [Hooper et al., 2000]). The Federal Government implemented the Airports Act 1996, and in doing so privatised the majority of Australia's major airports under long-term (99 year) leasing agreements. The new private owners developed their land assets with non-aviation (commercial) development (see Freestone et al., 2006) to increase and diversify revenue.

With respect to RRR airports in Australia, the new policy steering airport ownership and investment has taken its toll. No less than 30 RRR airports closed between 2000 and 2005 (BITRE, 2008), which Donehue et al. (2012, 5) have described as a function of the “decoupling of infrastructure investment from any kind of guaranteed associated income stream.” That is, many RRR airports were, and still are, reliant on subsidies for airport maintenance and development, but airlines and other airport users provide revenues for continued operations.

The mixture of funding shortfalls paired with potentially risky or unattractive levels of passenger demand make RRR airports a complex governance environment. Multiple stakeholders with differing, competing interests must negotiate terms for ongoing funding and service provision in a context scarce of funding, high in competition, and critical to the provision of RRR community access to essential services. Identifying and understanding the primary concerns for the ongoing sustainability of RRR airports, be they large, medium, small or rural, will provide a valuable starting point for rethinking policy, governance and management for RRR airports.

A broad range of concerns for airport management has been identified from past literature and discrete key informant discussions. The following section outlines the identified concerns with respect to large, medium, small and regional airports, and translates these concerns into insights for the governance of Australia's airports.

3.1. Airport management concerns for large airports

Australia's larger airports are dominated by market driven concerns of supply and demand; flexing and adapting to meet new competitive strategies by airlines, such as a shift by travellers away from hub airports (as per Noakes, 2011), while meeting social, economic and environmental needs of communities (James & Freestone, 2009). Relationships between Australia's large airport leaseholders and their Local and State Governments have been mixed; with some major airport regions showing few signs of conflict with their airports, and others appearing hostile via a suite of court cases and active lobbying of government officials. A principal concern at large capital city airports has been the development of airport land for non-aviation commercial land use development ([Freestone and Baker, 2010], [Freestone and Baker, 2011] and [Freestone et al., 2011]). Most of the capital city airports in Australia have developed federally owned land (where they have a 99 year lease) for commercial revenue with shopping malls, hotels and other commercial outlets. This has generated considerable conflict with surrounding municipalities. The argument from the airport perspective has been that commercial revenue is a critical source of funds to supplement aviation revenue (see Baker & Freestone, 2011 for a review of this business model).

Inner city regional airports that are privately owned such as Bankstown (Sydney), Essendon (Melbourne) and Jandakot (Perth) have also developed commercial land uses to supplement general aviation and RPT revenues. Again, the surrounding municipality concern is mirrored for these airports that non-aviation land uses tend to dominate the traditional lands reserved for aviation purposes. More remote large regional centres such as Bundaberg or Townsville are attempting to diversify their land uses around the airport to support additional revenue sources. The mining boom in Western Australia and Queensland has placed pressures on airports to supply services both for RPT and freight. Surrounding airport land provides an opportunity to develop parking, car leasing and a variety of other land uses associated with industry needs to service developing areas from the regional centre.

The past decade has seen a general improvement in relations between many airport leaseholders and their local jurisdictions, all of whom have made concerted efforts to improve the ways in which airports and their surrounding jurisdictions talk with one another. For example, Adelaide has a multi-jurisdictional integrated planning forum that brings together Adelaide Airport, the South Australian State Government, the

City of West Torrens and its surrounding local governments to discuss land use development for the area within and around the airport (Appold et al., 2008, p. 37). The result is improved relationships between the local jurisdictions and the airport leaseholder, and highly positive feedback from the Federal Government in the latest round of Airport Master Plans in 2009.

The above example is representative of actions taken by a number of major airports (and their surrounding jurisdictions) to improve their planning and development relationships, taking responsibility unto themselves to fill the relational void left from privatisation. The Federal Government appears savvy to the planning and development problems experienced at the interface of major airports and their neighbouring jurisdictions, identifying the need for improved horizontal relationships first in the National Aviation Policy Green Paper of 2008, and elaborated further in the National Aviation Policy White Paper released in December 2009.

Long-term concerns for large airports often stem from plausible future changes to aviation operation and policy (Humphreys & Francis, 2002). For example, the investment required to augment runways, taxiways and terminals to cater to new aircraft types and/or safety standards is sizeable and difficult to predict. Other strategic concerns relate to alternatives to air transport, such as improved road and rail linkages, and new communication technologies such as video conferencing. More immediate concerns focus towards competition between airports for airline services, and the separation of planning authority between airports and their host communities ([Charles et al., 2007] and [Freestone, 2009]).

With respect to airport management and governance, large airports need to retain a capacity to flex and adapt to changes in market forces and operational requirements, while also protecting operational airspace from urban encroachment. The separation of planning authority between airports and their urban domains suggests that airports should look to build and maintain strong relationships with external planning agencies to ensure that their long-term operational sustainability is protected. The need to maintain an ability to change rapidly with the air travel market suggests that policy should remain at arm's length and not be overly prescriptive. That is, it is recommended that policy makers continue to set visible and accountable limitations to airport operators without stymieing their ability to adapt or make rapid decisions.

3.2. Airport management concerns for medium-sized regional airports

Medium-sized airports face many of the same market-type concerns as large airports do. However, many of Australia's medium-sized airports remain under local or state government ownership. Medium-sized airports may not be able to compete with the larger airports for long-haul international flights due to incompatible infrastructure, however, medium-sized airports do appear to compete strongly for domestic and regional routes. For example, Ballina Airport (NSW) provides an alternative to Coolangatta Airport as an access point for the Byron Bay tourist area, and competes with Lismore and (to a smaller extent) Coffs Harbour for the catchment of passengers travelling to Sydney. Similar to large airports, Ballina is also rethinking its approach to land use in and around the airport, however, as the Ballina Shire Council is the presiding jurisdiction for land use planning both in and close to the airport, there is little emphasis for airport decision makers to create and manage

relationships between airport and council as they are already embedded in the government hierarchy.

Considering the above, implications for business models and governance are drawn again towards the market-based interests of meeting changing demands within the air transport sector, while also protecting their own markets from other nearby “substitute” airports. This heightened competition suggests a race between airports for generating and protecting sufficient economies of scale for airport revenues to fund airport maintenance and development. However, if medium-sized airports fail to compete successfully with their neighbouring airports, subsidising from other government revenues may be necessary to protect the long-term sustainability of some medium-sized airports.

The management structure of many medium sized airports incorporates trained airport staff and levels of expertise that can support RPT services. Most of the managers have contact at the national levels through the Australian Airports Association chapter for RRR airports. Challenges most often faced at this level occur with respect to changing technology and requirements for airports handling RPT. For example, a primary issue that currently is affecting mid-sized airports is security screening. With the introduction of regional jets comes the requirement of security screening (which is not required for turbo-props) and the costs with the associated management and maintenance. Smaller mid-sized airports do not have the staff or expertise to mount the present systems in a cost effective manner. In the long term, this will affect which airlines will land, and their competitiveness with larger regional airports.

3.3. Airport management concerns for small rural/remote airports

The primary demand for small airports hinges on a number of social benefits to rural Australia that do not always stack-up to efficiency measures for infrastructure provision. For example, the Flying Doctors of Australia rely on a network of disconnected airports around remote Australia to access patients who have no other source of healthcare. Fly-in and fly-out health and social services are critical to rural Australia. Secondly, emergency services rely on regional and remote airports to deliver fire protection and flood relief. Australia is prone to both types of natural disasters on annual/semi-annual bases and the air network is critical to mitigation and relief efforts. The 2011 floods in Queensland were testament to the importance of the air network in delivering needed supplies and people when roads are cut off. Lastly, general aviation (GA) is a critical component of the Australian bush culture which is increasingly being forced out of large airports. Small airports provide an important home to GA. The non-market value of remote airports is measured in the strong social benefits that these airports play in the fabric of Australian culture.

Airports in rural and remote areas of Australia struggle for the funding of maintenance and development of aerodromes (withheld, 16/09/2011), which is a problem compounded by the lack of passenger demand. This lack of demand translates to 80% of Australia's rural airports attracting less than one return flight per day (BITRE, 2008, xxix). In turn, the low number of passengers for these airports creates capacity concerns for providers of air services with respect to the selection of appropriate aircraft, and for the level of investment in servicing remote communities. As one respondent commented, the low numbers of passengers translate into airline

concerns for the availability and cost of suitable aircraft for “thin routes” to remote communities, which may have a follow-on effect to the public's perceptions of regional airlines, should price or product change in line with the provision of new or different aircraft (withheld, 16/09/2011).

Local governments, which are most frequently responsible for the provision and servicing of rural and regional airports, do not always have the knowledge or skills required for the long-term management of their airports. Often the airport is a small component of the council budget that ranks with trash removal or mowing; within this context, the manager of the airport is often a multi-tasker who has charges in other services for the local government. Thus, the expertise required for development and maintenance of the airport is often lost or overlooked for other council issues. However, some councils have adapted management strategies to compensate for their lack of airport expertise. For example, Boonah Shire Council (Queensland) has adopted a network model of governance for the management of its local airstrip, as much of the intellectual capital required to run and oversee flight operations existed within the local flying community (i.e. aero clubs and private). By working with its local flying community, the local government has been able to make better informed decisions with respect to managing airspace and zoning land uses close to the airstrip and associated flight paths to ensure the long-term preservation of flight operations at Boonah. This example represents an innovative approach to managing a rural airfield by drawing on resources that lie externally of the primary decision making authority to inform its decisions — enhancing the local government's capacity to manage the airfield through building and utilising stronger relationships with the aviation community.

Discerning what the above concerns imply for airport business models and governance, rural airports need to identify and adopt strategies that protect community access to air services. As local governments may not always have the intellectual capital to make effective airport-related decisions, local governments may need to be strategic in creating, fostering and leveraging working relationships with airport-user groups for operational concerns. At the same time, local governments may have to secure funding for ongoing airport maintenance and development from more central authorities, as market sources of revenue (airlines) are unlikely to be enough due to the low frequency of flights and passenger numbers.

3.4. Conceptual framework for airport management and governance decision making
With respect to the above implications for business models and governance of Australia's airports, Table 1 provides a concise summary of the key insights from 3.1, 3.2 and 3.3. The following table restates the primary concerns for each classification of airport, and unpacks the implications for governance and business models into themes for decision makers and policy makers to consider and appreciate when approaching the tasks of policy development and decision making.

Table 1. Operational, business and governance concerns for Australia's airports.

Airport classification	Dominant issues and concerns	Implications for suitable business models and governance arrangements
Large	Meeting demands for infrastructure supply	Business model implications:
		• Rapid response
	Cost	• Flexibility
	Urban proximity and encroachment	• Adaptation
	Funding development met within existing agreements	• Relationships with external planning agencies
		Governance implications:
		• A need for both market and network approaches to managing airports
		• Government defines a broad operating environment to allow airports to adapt and flex rapidly to meet market demands
Medium	Competing with other airports for service	Business model implications:
		• Rapid response
	Economies of scale	• Flexibility
		• Adaptation
		• Protective of markets
		Governance implications:
		• A need for flexibility and adaptation to competitive demands
		• May require government support to continue operation
Small	Competing with other airports for service	Business model implications:
		• Rapid response
	Negotiating for airline service	• Flexibility
	Negotiating for development funding	• Adaptation
		• Protective of markets
	Availability of suitable aircraft	Governance implications:
		• Likely to require government support and subsidies to continue operation
		• Sourcing of funding for ongoing maintenance and development a priority
Rural/remote	Adequacy of infrastructure for emergency services	Business model implications:
		• Enduring
	Negotiating for airline service	• Protected
	Negotiating for	• Strategic relationship building, with

Airport classification	Dominant issues and concerns	Implications for suitable business models and governance arrangements
	development funding	respect to drawing on available networks for intellectual capital
	Availability of suitable aircraft	• Meet a minimum of emergency services access capability
	Availability of knowledgeable staff	Governance implications:
		• A need for government support and subsidies to continue operation and maintenance
		• Relationships with airport user groups to enhance management capacity and effectiveness

4. Opportunities for management and policy

The primary theme that comes through Table 1 and the various scales of airports is the importance and potential of networks. Large airports (and inner city regional airports) have forged strong alliances with surrounding planning councils; much of which was done before the revision of the Airports Act 1996 which mandated stakeholder committees. The development of a more network governance approach in this case has improved relationships on both sides of the airport fence.

For medium sized airports the high level of competition between airports for passengers and airline service does not always result in best outcomes for communities. The importance and utility of the national associations (AAA and RAAA) need to be emphasized. The associations play an important role both at the policy and management levels for air service. An adversarial approach is of course sometimes necessary for specific agendas and interests. However, a strong network focus for effective air service delivery may provide a different platform for associations and policy makers. Strong networks between airports can also be fostered at the State level — where State interests are often the primary focus in healthy networks. A clear example of this has been demonstrated by Adelaide airport and the fostering of strong relationships between the Capital City airport and satellite communities such as Ceduna and Port Lincoln. The AAA Division of South Australia shares data, training needs and current trends in technology amongst the regional airports.

A network approach can provide an opportunity for cost sharing in the training of airport maintenance and ground staff. The retention and training of staff is a major issue for mid-sized airports and a coordinated network response would help overcome barriers to expensive staff training by airports through coordinating joint training sessions.

There is presently a vacuum of policy in Australia with respect to RRR air services. For small/rural airports the important social role that airports fulfil is critical to recognise. In the absence of policy to protect airfields, airport and local government managers need to look beyond the scope of their organisational boundaries for the resources and expertise to make effective decisions. Other associated networks such as the aviation community, mining, local business interests and the Flying

Doctors have an integral role to play in ensuring airports do not close down. The intellectual capital in these organisations provides an important resource for airport operators to draw upon for making future decisions. The primary question to be asked is should policy be developed at the national or state levels to support the role of RRR air services? And secondly, should Local Governments be carrying out policy by ensuring that local Planning Schemes recognise airports as critical infrastructure?

At a policy level, there is clearly an equity issue with respect to RRR airports and airlines compared to their larger counterparts. Air transport policy in Australia is primarily focused on the large airport and airlines, and policy tailored to the smaller airports needs to be developed to support the long term provision of air transport infrastructure in the regions. Business models are different between scales of airports — and the policies and procedures that are imposed on smaller airports places a burden on their scale of operation and the ability to keep costs down.

5. Conclusion

The development of policy for airports and airlines is a historical artefact in Australia. Policy has not kept up to the rapid changes that aviation has faced over the last decade. RRR communities have experienced a rapid reduction in the number of operating airports over the last decade; regional airlines have also been reduced significantly. Regional passenger numbers have increased dramatically — and the stresses on regional air transport reflect tensions in the management of smaller airports. In mid-sized regional airports the concerns are around sufficient economies of scale to compete on costs. Airports compete for local maintenance and ground staff and for airline service. At the small sized airports, the attraction of airlines and RPT service is a critical issue; suitable aircraft for “thin” routes is a challenge for airlines because companies are not making smaller capacity aircraft for RPT service.

We see an emergence of a network governance approach to address the management challenges faced by different sizes of airports. The scale of airport operation has a significant impact on how the airport does business and the adaptation strategies necessary for economies of scale. Business models for airports and airlines at a regional level must be allowed to adapt to overcome limitations in funding and access to services. An integrated approach by the Federal, State and Local governments and industry groups needs to be fostered to enable future air transport to connect RRR communities in Australia.

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